

## **Remarks**

Applicant submits this response after the final Office Action at least places this application in better form for appeal. This response is necessary as it clarifies and/or narrows the issues for consideration by the Board and was not earlier presented because Applicant believed that the prior response(s) placed this application in condition for allowance, for at least the reasons set forth in those responses. Accordingly, entry of the present response, as an earnest attempt to advance prosecution and/or to reduce the number of issues, is requested under 37 C.F.R. § 1.116.

This application has been carefully reviewed in light of the final Office Action. At the time of the final Office Action, claims 1-14 were rejected. Applicant respectfully requests reconsideration of the application in view of the following remarks.

Claims 1-3 and 10-11 stand rejected under 35 U.S.C. § 102(b) over *Hovestadt* et al. (U.S. 5,453,460, hereinafter *Hovestadt*). Claim 4 stands rejected under 35 U.S.C. § 103(a) over *Hovestadt* in view of *Moriarty* et al. (U.S. 6,692,670, hereinafter *Moriarty*). Claims 5-7 and 14 stand rejected under 35 U.S.C. § 103(a) over *Hovestadt* in view of *Patzelt* et al. (U.S. 5,766,370, hereinafter *Patzelt*). Claims 8-9 and 13 stand rejected under 35 U.S.C. § 103(a) over *Hovestadt* in view of *Patzelt* and Applicant's admission of prior art. Lastly, claim 23 stands rejected under 35 U.S.C. § 103(a) over *Hovestadt*.

### **Remarks Directed To Rejections To Claims 1-3 And 10-11 Under 35 U.S.C. § 102(b) over Hovestadt**

As to claims 1-3, rejections thereto as stated on page 2 of the final Office Action are substantially the same, if not word-by-word identical, to the corresponding rejections stated on pages 2-3 of the non-final Office Action dated March 10, 2008.

In the "Response to Arguments" section stated on page 6 of the final Office Action, the Patent Office states that Applicant's arguments filed June 18, 2008 are not persuasive

because "in response to applicant's arguments that *Hovestadt* does not teach that the paint residue is a viscous liquid at ambient temperature, please see the new rejection as set forth above. In addition, while the overspray of *Hovestadt* would be a solid if it was directly distilled, *Hovestadt* teaches reacting the overspray with compounds which are reactive with isocyanate groups (Abs), thereby avoiding hardening the dispersion."

It is not clear to the Applicant as to what "the new rejection as set forth above" refers to, other than the simple repeat identified above. Cross-linking and hence the hardening of *Hovestadt* overspray **can be avoided** does not negate the fact that the overspray of *Hovestadt* is **capable of** solidifying on its own, which among others, sets apart the *Hovestadt* overspray away from the "paint waste stream" as recited in claim 1.

MPEP 707.07(F) in relevant portion provides:

If it is the examiner's considered opinion that the asserted advantages are not sufficient to overcome the rejection(s) of record, he or she should state the reasons for his or her position in the record, preferably in the action following the assertion or argument relative to such advantages. By so doing the applicant will know that the asserted advantages have actually been considered by the examiner and, if appeal is taken, the Board of Patent Appeals and Interferences will also be advised.

As stated on pages 5-6 of the Applicant's last filed Amendment of June 18, 2008, the paint residue of claim 1 is not only illustratively referred to as a "high viscous liquid at ambient temperature", but also one that can be extracted from a paint waste stream further illustratively defined as a liquid that "does not contain large amounts of gelled paint."

In contrast, as stated on page 6 of the Applicant's Amendment of June 18, 2008, the overspray of *Hovestadt* is "substantially a solution or a liquid dispersion which is at least impliedly or relatively lower viscosity" and yet capable of forming a "cross-linkable composition on its own.

Therefore, the *Hovestadt* fails to teach or suggest a paint residue extracted from a paint waste stream as illustratively defined above, much less a paint residue having a relatively higher viscosity at ambient temperature which probably requires advanced thinning prior to use in a coating application. Since *Hovestadt* fails to teach or suggest at least one element of the independent claim 1, claim 1 and all the claims dependent therefrom are submitted to be patentable under 35 U.S.C. § 102(b) over *Hovestadt*.

With regards to claim 10, it is stated on page of the final Office Action that "*Hovestadt* teaches the coating in an aqueous dispersion (Abs), which is inherently a viscous liquid." Applicant respectfully traverses the rejection.

Claim 10 recites a coating of claim 1, "wherein the paint residue is a viscous liquid at ambient temperature." In at least one example, the paint residue may be extracted through heat-assisted distillation followed by suitable cooling, *Id.* The resultant paint residue has a certain hydroxyl content, may be thinned before being subjected to a particular application, and more importantly is "capable of reacting with a hardener to form a useable surface coating" (line 27 of page 3 to line 1 of page 4).

Contrary to the Patent Office's assertion stated above, *Hovestadt's* teaching of a coating in an aqueous dispersion does not amount to, even inherently, to a viscous liquid. Applicant notes for the record that a salt water, being an aqueous dispersion of solute sodium chloride (NaCl), is not a viscous liquid as commonly known.

MPEP § 2112 in relevant portion provides:

**IV. EXAMINER MUST PROVIDE RATION-ALE OR EVIDENCE TENDING TO SHOW INHERENCY**

"To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and it would be so recognized by persons of ordinary skill. *Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is*

***not sufficient.'*** *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999).

Overspray of *Hovestadt* is anything but a viscous liquid. As expressly stated in *Hovestadt*, the overspray is a solution or a liquid dispersion that can be directly applied as a coating composition without additional steps such as solvent thinning otherwise ordinarily needed for a thick or viscous composition (col. 7, lines 36-42).

Claim 11 recites a coating of claim 1, wherein "the paint residue is diluted prior to being combined with the hardener for application on the substrate." While *Hovestadt* may have taught adjusting the spray viscosity of the overspray by adding water, *Hovestadt* fails to teach or suggest diluting a paint residue prior to being combined with a hardener for spray application. As stated above, the paint residue being incapable of self-hardening or cross-linking is drastically different from the overspray of *Hovestadt*, which is capable of self-hardening.

According to the instant claim 11, the diluted paint residue must be combined with the hardener before a cross-linked paint composition may form on the substrate. In contrast, the overspray of *Hovestadt* is diluted to have its polyisocyanate moieties masked by isocyanate reactive reagents externally added, preferably along with water, wherein examples of the isocyanate reactive reagents illustratively include polyhydroxyl compounds (col. 3, lines 21-24). In the event the isocyanate reactive reagents are insoluble in water, various emulsifiers may be added to render them water soluble. The diluting step of *Hovestadt* results in an aqueous mixture wherein isocyanate groups within the overspray are protected, the shelf life thereof is prolonged and the modified overspray may be reused again (col. 6, lines 19-26).

Therefore, unlike the diluted paint residue of the instant claim 1 wherein a hardener must be added in to form a cross-linked paint composition, the overspray of *Hovestadt* is self-crosslinkable and only needs externally supplied hardener when polyisocyanate masking reagents are used for a rather unrelated purpose of prolonging shelf-life of the overspray.

Reconsideration and withdrawal of rejections to claims 1-3 and 10-11 under 35 U.S.C. 102(b) over *Hovestadt* is solicited.

**Remarks Directed To Claim 4 Under 35 U.S.C. § 103(a)  
Over Hovestadt In View Of Moriarty**

As stated on pages 3-4 of the final Office Action, "Hovestadt does not teach the claimed MDI. However, Moriarty teaches . . . specifically Rubinate 1840 . . . [which] is a 50:50 mix of 4,4'-diphenylmethane diisocyanate (CAS 101-68-8) and polymeric MDI (CAS 9016-87-9)."

Claim 4, being dependend from independent claim 1 now believed to have been allowable in light of the remarks stated hereinabove, is submitted to be patentable based on dependency from claim 1. In addition, claim 4 is patentable on at least one independent ground as given below.

Contrary to the Patent Office's assertion cited immediately above, the Rubinate 1840 data sheet rather states that Rubinate 1840 is a binder of organic diisocyanate (see Reactivity Hazard and Description) and reacts with water as diisocyanates to form ureas and carbon dioxide gas (see Handling and Storage). The mere listing of two registry numbers 101-68-8 and 9016-87-9 does not by itself state with requisite particularity that Rubinate 1840 is a 50:50 mix of the two.

Based on the Rubinate 1840 data sheet, it is equally fair to state that Rubinate 1840 is a commercial product containing chemicals of 101-68-8 with an approximate concentration of 50% *or* a commerical product containing chemicals of 9016-87-9 with an approximate concentration of 50%.

After all, it is not clear, based on the Rubinate 1840 data sheet, as to whether the Rubinate 1840 is a binder of diphenylmethane diisocyanate as repeatedly stated in the data sheet,

or is a mixture of a 4,4' diphenylmethane diisocyanate and polymethylenopolyphenyl polyisocyanate, let alone a mixture of 50:50 of the two.

Reconsideration and withdrawal of the rejection to claim 4 under 35 U.S.C. 103(a) over *Hovestadt* in view of *Moriarty* is solicited.

**Rejections To Claims 5-7 And 14 Under 35 U.S.C. § 103(a)  
Over Hovestadt In View Of Patzelt**

Claim 5 stands rejected under substantially the same reasoning, if not word-for-word identical, to the rejection stated on pages 4-5 of the non-final Office Action dated March 10, 2008.

In response to Applicant's last filed response dated June 18, 2008, the Patent Office, while acknowledging *Patzelt* teaches recovering a solvent and removing a residue, states however "the process of separating solvent from a paint residue is the same, whether or not one's goal is to retain the solvent or the residue." The Patent Office further states "*Hovestadt* gives motivation to remove solvent from the overspray in order to adjust the spray viscosity."

As acknowledged by the Patent Office, *Patzelt* does not teach recovering a paint residue. The mere fact a paint residue could be recovered but however failed to be recovered is not sufficient to say *Patzelt* teaches recovering a paint residue.

In fact, collecting and recovering the paint residue is at least one of the features that sets the present invention apart from the cited prior art, such as *Patzelt*, which clearly teaches to the contrary as to discarding the paint residue.

Claim 14 recites the process of claim 5 "further comprising a hardening agent reactive to an epoxide group of the paint residue."

The Patent Office states *Hovestadt* teaches "polyisocyanate as hardener (reactive to epoxide) (7:35-40)." Applicant respectfully traverses this rejection.

Applicant submits that polyisocyanates are *not* reactive to epoxide groups but only to the hydroxyl groups which are present as end moieties in epoxy resins. Epoxy resins also contain epoxide linkages. Polyisocyanates are reactive towards active hydrogen atoms, whereas epoxides contain a ring structure involving an ether linkage. Therefore, claim 14 is submitted to be patentable based on its dependency from the independent claim 5, now believed to be in allowable form, and based on the independent ground stated immediately above.

Reconsideration and withdrawal of rejections to claim 5-7 and 14 under 35 U.S.C. 103(a) over *Hovestadt* in view of *Patzelt* is solicited.

**Remarks Directed To Rejections Of Claims 8-9 And 13 Under 35 U.S.C. § 103(a)  
Over Hovestadt In View Of Patzelt And Applicant's Admission Of Prior Art**

Claims 8-9 and 13, being dependent from the independent claim 5 now believed to have been allowable in light of the remarks stated above, is submitted to be patentable based on dependency from claim 5. In addition, claims 8-9 and 13 are each patentable on at least one independent ground as given below.

As to claims 8-9, rejections thereto as stated on page 5 of the final Office Action are substantially the same, if not word-by-word identical, to the corresponding rejections stated on page 5 of the non-final Office Action dated March 10, 2008.

Again, Applicant has not been provided the reasons for the Examiner's position in the record as to why relevant portions of Applicant's last filed response dated June 18, 2008, as reproduced below, fails to overcome the instant rejections, pursuant to the above cited MPEP 707.07(f).

In response, Applicant respectfully traverses this rejection based on dependency of claims 8-9 from the independent claim 5 which is believed now to be allowable . . .

Moreover, Applicant submits that independent ground exists for the patentability of claims 8-9. While it is one thing that paints ordinarily settle upon passive standing which

naturally results in heavy pigment falling to the bottom, it is quite another when separation of color pigments is advantageously improved by the assistance of high speed rotation as recited in claims 8 and 9. As defined in the specification, the high speed rotation may take the form of 8000G force for decanter or 13000G force for centrifuge. With the improved process as embraced in claim 8 or claim 9, the heavy pigment in the paints "can readily be separated from the washings prior to distillation, yielding a clear resin upon processing" (lines 20-25 on page 4 of the specification). As such, and contrary to the assertion stated on page 5 of the Office action, the prior art does not teach or suggest claim 8 in current form.

(pages 10-11 of Applicant's last filed amendment dated June 18, 2008)

Claim 13 recites the process of claim 5 "further comprising, prior to the placing step, purifying the paint waste stream according to specific gravity of its components through high speed rotation."

As detailed at lines 15 to 25 on page 4 of the specification, in the event that color matches cannot be obtained using the paint residue, the basic resin and pigment mixture of the paint residue may be separated according to specific gravities of each component. The heavy pigment can readily be separated from the washing prior to distillation, yielding a clear resin upon processing.

Moreover, to say that Applicant has admitted that it is well known in the art . . . that [separation] process can be accelerated using an industrial . . ." is misplaced. The phrase "it is well known in the art" is only contained in the sentence that concludes with a period before the next sentence referencing decanter or centrifuge. Please see, for instance, lines 19-21 on page 4 of the specification as originally filed.

Reconsideration and withdrawal of rejections to claims 8-9 and 13 under 35 U.S.C. 103(a) over *Hovestadt* in view of *Patzelt* and Applicant's admission of prior art is solicited.

**Remarks Directed To Rejection Of Claim 12 Under 35 U.S.C. § 103(a) Over Hovestadt**

Claim 12, being dependent from the independent claim 1 now believed to have been allowable in light of the remarks stated above, is submitted to be patentable based on dependency from claim 1. In addition, claim 12 is patentable on at least one independent ground as given below.

MPEP 706.02(j) in relevant part provides:

35 U.S.C. § 103 authorizes a rejection where, to meet the claim, it is necessary to modify a single reference or to combine it with one or more other references. after indicating that the rejection is under 35 U.S.C. § 103, the *examiner should set forth* in the Office action:

- (A) *the relevant teachings of the prior art relied upon, preferably with reference to the relevant column or page number(s) and line (numbers) were appropriate,*
- (B) the difference or differences in the claim over the applied reference(s).
- (C) the proposed modification of the applied reference(s) necessary to arrive at the claimed subject matter, and
- (D) *an explanation >as to< why >the claimed invention would have been obvious to< one of ordinary skill in the art at the time the invention was made.*

"To support the conclusion that the claimed invention is directed to obvious subject matter, *either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious* in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985).

(Emphasis Added)

In light of the above-cited MPEP provisions and with the reasons given below, Applicant respectfully submits that claim rejections stated on page 6 of the final Office Action

are merely conclusory and have failed to set forth "articulated reasoning with some rational underpinning" and as such, fails to establish a *prima facie* case of obviousness.

In rejecting claim 12 under 35 U.S.C. § (a) over *Hovestadt*, the Examiner acknowledges that *Hovestadt* "does not teach the amount of thinning solvent used", yet maintains that claim 12 is nevertheless obvious since "the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render Applicant's claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 2033, MPEP 2144.05. The amount of diluent can be adjusted to obtain a coating of the desired viscosity."

It is clear that other than simply repeating what is recited in claim 12, the rejection under 35 U.S.C. § 103(a) provides no articulated reasoning as to the obviousness, let alone factual findings in the *Hovestadt* that would support the rejection, as otherwise required in establishing a *prima facie* case of obviousness under MPEP 706.02(j) cited above.

Moreover, the "routine testing and general experimental conditions" exception per *In re Aller* simply does not apply here.

The process of *In re Aller* which was performed at a temperature between 40°C and 80°C and an acid concentration between 25% and 70% was held to be *prima facie* obvious over a reference process which differed from the claims only in that the reference process was performed at a temperature of 100°C and an acid concentration of 10%.

Unlike the reference of *In re Aller* which in fact provided a reference temperature with a defined value of 100°C and a reference acid concentration with a defined value of 10%, the reference *Hovestadt* cited against the instant application is completely silent as to what an amount of thinning solvent could at all be used, as acknowledged by the Patent Office that "*Hovestadt* does not teach the amount of thinning solvent used" cited above. In fact, *Hovestadt* does not appear to teach either any "general conditions" of the claimed limitation, nor any "optimum or workable ranges" thereof.

Taken together, Applicant respectfully submits that a *prima facie* case of obviousness has not been established in the subject rejections.

Reconsideration and withdrawal of rejections to claim 12 under 35 U.S.C. 103(a) over *Hovestadt* is solicited.

### **CONCLUSION**

For the foregoing reasons, Applicant believes that the final Office Action of September 18, 2008, has been fully responded to. Some of the present remarks were not presented earlier because Applicant believed that the previous claims addressed all issues of patentability. Consequently, in view of the above remarks, Applicant respectfully submits that the application is in condition for allowance, which allowance is respectfully requested.

Please charge any fees or credit any overpayments as a result of the filing of this paper to our Deposit Account No. 02-3978.

Respectfully submitted,

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